

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

June 1, 2015

Via E-mail
Mr. Simon Dingemans
Chief Financial Officer
GlaxoSmithKline plc
980 Great West Road
Brentford
Middlesex
TW8 9GS
United Kingdom

Re: GlaxoSmithKline plc

Form 20-F for the Fiscal Year Ended December 31, 2014

Filed February 27, 2015

File No. 1-15170

Dear Mr. Dingemans:

We have reviewed your May 6, 2015 response to our April 2, 2015 letter and have the following comment.

Please respond to this letter within 10 business days by providing the requested information or by advising us when you will provide the requested response. If you do not believe the comment applies to your facts and circumstances, please tell us why in your response. Please furnish us a letter on EDGAR under the form type label CORRESP that keys your response to our comment.

After reviewing the information you provide, we may have additional comments and/or request that you amend your filing.

Exhibit 15.2: GSK Annual Report 2014
Notes to financial statements
Note 14: Taxation, page 156

1. Please provide us proposed revised disclosure to be included in future periodic reports that explains the increase in tax rate associated with oversees operations and the decrease in tax rate associated with the benefit of intellectual property incentives consistent with your response to previous comment 1. In your disclosure, please identify the major tax jurisdictions involved and include a brief explanation of patent box regimes.

Mr. Simon Dingemans GlaxoSmithKline plc June 1, 2015 Page 2

You may contact Mark Brunhofer, Senior Staff Accountant, at (202) 551-3638 or Lisa Vanjoske, Assistant Chief Accountant, at (202) 551-3614 if you have questions regarding the comments. In this regard, do not hesitate to contact me at (202) 551-3679.

Sincerely,

/s/ Jim B. Rosenberg

Jim B. Rosenberg Senior Assistant Chief Accountant